



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
<http://www.blm.gov>



M0450002

IN REPLY REFER TO:
UTU-087809
3590
(UT-923)

MAY 31 2007

RECEIVED

JUN 05 2007

CERTIFIED MAIL--Return Receipt Requested

DIV. OF OIL, GAS & MINING

Mr. Greg Foy
P.O. Box 580
Wendover, Utah 84083

Re: Mining Plan Federal Potash Lease UTU-087909-UTU-087818, Comments to Mining Plan submitted June 15, 2006 and revised February 6, 2007.

Dear Mr. Foy:

The Bureau of Land Management (BLM) received your informal response to comments from the August 23 2006 meeting and the draft revision submitted to the Utah Division of Oil, Gas and Mining (DOGM) on February 6, 2007. We have reviewed your response and offer the following comments:

1. Reclamation Costs. The BLM has no requirement for the operator to submit reclamation costs. However, we know the DOGM does. We are providing comments as if we were calculating the bond.
 - a. BLM accepts the commitment that reclamation will include completely filling in the ditches. However we are not in total agreement with the calculations.
 - i. North Ditches: A "DRAFT" reclamation plan submitted by Reilly (1994) [Enclosure 1] showed the north ditches represent 732,000 yds of material. However, the analysis provided shows 197,700 yds of material. This lower yardage is based only an assumption that the berm is 5 feet high and triangular in shape. If the berm size is to be utilized for the calculation, then there should be a more detailed basis of the berm.
 - ii. The analysis shows 12.24 miles of ditches on the North leases and BLM calculates 13 miles for the FEDERAL ONLY excluding section 16 (from figures 4.7 and 4.6 in the mine plan).
 - iii. South Ditches: The berms around the Primary Pond V were constructed by excavating material outside the berms thus creating a ditch (not a collection ditch) and the berms are 10.23 miles long. The material used to

build the berms was excavated from the outside of the pond. This created a ditch which has filled with brine and requires filling. Also, Reilly calculated the material of the Pond V Dike/ditch at 510,000 yds of material without the interior ditches.

- iv. Inside the pond there are over 15 miles of ditches that require reclamation (from figures 4.7 and 4.8).
 - b. Equipment Choice.
 - i. The plan specifies a D-9 Dozer. This piece of equipment may be appropriate on the areas that contain hard salt, but in the areas where there is mud, BLM feels it is not appropriate. Enclosure 1, (the 1994 DRAFT reclamation plan) submitted to the BLM contains a plan by the former manager (with 30 + years of experience at this facility) that specified a Swamp D65 Komatsu for reclamation of the Federal Portion. This piece of equipment equates to about a D6 LGP in horsepower and weight and because it is classified as a “swamp” dozer BLM thinks this is an appropriate choice of equipment for out on the mud (BLM has also enclosed a copy of these specifications for your information).
 - ii. Productivity. BLM notices the productivity of the equipment used on the DRAFT 1994 plan was only 150 yds per hour. Apparently the prior plan applied an adjustment factor for the material type and conditions.
 - c. Costs: All costs including rental, operating, operator, insurance, and taxes must be included in the total costs. Also, because reclamation will occur at only one time, there should be multiple mobilization costs in the estimate.
2. Drawing 6.14 Total Disturbed Area.
- a. This drawing shows construction of future ditches which of course is necessary. The problem with this plan is all water from the south leases is to be put through a single pipe and flow meter, but the Pond V system pump station and the drawing does not reflect this design. Further, in T 1 S R 18 W Sec. 36 this area is shown as a federal lease, but this is a state lease.
 - b. One map should show all the federal leases individually with the lease numbers.
 - c. Also, the surface ownership is required to be shown.
 - d. The federal lease boundary outline can be used on the remaining maps.
 - e. Also, in T 2 S R 17 W section 4 the ditch extension is not shown.
 - f. There are no specifications for the ditch size for the future ditches. These need to be shown.
3. Drawing 4.3 and 4.4 Drainage Flow Path. These drawings were incorrect. We met with Mr. Greg Foy and Mr. Russ Draper and they corrected the drawings. We are returning the corrected drawings (Encl 2 and Encl 3). These drawings again should be verified. Also, where the brine turns into product (Magnesium Chloride) it may be helpful to change the arrow color.
4. Drawing 4.8. The collection ditch (existing) on the south end of pond V is in NON-COMPLIANCE because the map shows the ditch to be some 250 feet from the lease boundary, and 43 CFR 3594.5 (c) states: “Where minerals are taken from the earth in solution, such extraction shall not be within 500 feet of the boundary line of lands contained in the approved mine plan without the written permission of the authorized office”.

The present or planned status of this ditch must be addressed in the plan. There is a new ditch planned paralleling this ditch. If the old ditch is to be abandoned then there should be a discussion in the plan about what is going to happen to the old ditch.

5. Mineral Waste Disposal. The plan needs to specifically address the disposal of wastes resulting from the mining, reduction, concentration, or separation of mineral substances. This should include the amount of salt that will be moved from Federal lands to the fee lands.
 - a. The salt laydown process should be part of this discussion. There needs to be more than the historical perspective as currently stated in the plan. The plan should discuss what is being contemplated by the company. (At the present time the brackish water is brought into the North and South Ripening ponds and salt dissolution takes place and then the brine is concentrated in the 4 North pond prior to being placed back onto the Salt Flats.)
 - b. The piping and ditching of the tails from the concentrator should be discussed.
6. There should be a discussion of isolation between the upper and lower brine aquifers.
7. Produced tonnage monitoring. A drawing showing the location of the loading systems is required along with the location of the scales or pumps. There should be a description of the scales and pumps and the frequency of calibration and the commodity each shipping point is for.
8. Pond V is being transitioned from a primary pond to a production area. More information is necessary on the characteristics of pond V. These characteristics should include the amount of salt deposited, and the amount and quality of brine entrained in the salt.
9. There needs to be more discussion about the alluvial fan aquifer wells. This discussion should include but not be limited to the following.
 - a. Location, size and depth, of the wells
 - b. Number of wells operating and not operating. (If the wells are not operating then the status of the wells should be discussed, including if the wells are plugged, caved, etc.)
 - c. How the wells were to be completed
 - d. The right-of-way boundary(s) and the ditch size
 - e. Ditch and retention locations
 - f. Pump sizes and utility access
 - g. Annual discharge quality and quantity. (This should be addressed as alluvial fan aquifer water for the laydown and plant/pond operations).
10. The plan is required to have, a list of Federal leases and other authorizations. This should be placed on page 10.
11. An explanation of how Ultimate Maximum Recovery will be achieved (43 CFR3590.0-5 (h)).
12. Page 77 shows an equation for total production. There needs to be a drawing of the types of equipment that will be used to determine the volumes to be obtained, especially for the NEZ and the SEZ. There is no discussion on the frequency of the brine chemistry from these locations. This equation should be submitted to BLM after every production season or on a time frame agreed with the company. Since there are no pumps for the SEZ, a map showing all locations should be shown

13. Measures for controlling fires, soil erosion, surface and ground water pollution, pollution of air, damage to fish or wildlife or other natural resources, hazards to public health and safety should be addressed.
14. Waste disposal. This should include trash, solid waste, hazardous waste, chemical spill plans etc.
15. All rights-of-ways should be addressed as part of the mining plan. These would include UTSL-062417 (Potable water), UTSL-066769 (Pipe from alluvial fan aquifer), UTSL-064788 (Wells Rural Elect Company for power), UTU-074087 (Salt Laydown).
16. The plan should contain a description of all new monitoring wells to be installed and a description of the data that will be obtained from them (e.g., chemical and hydrological). There should also be a description of how the data will be used.
17. The plan should contain a sketch of how the new monitoring points for the north and south leases will be set up. This should included but not be limited to: location, type of equipment, and utility runs.
18. A monitoring plan is required to measure impacts of brine extraction on the shallow-brine aquifer contained within the north and south leases. This shall include existing (plus any additional) monitoring wells along with the monitoring scheduling and protocol.
19. There should be a monitoring plan put into place for the alluvial fan aquifer to determine if the continuous pumping is affecting the aquifer by drawing water with higher TDS from the shallow brine aquifer due to the interfingering with the alluvial aquifer as shown in drawing 2.3. Monitoring scheduling and protocol need to be described.
20. The plan needs to discuss how information gets updated in the plan with all the measurements and data that are being gathered. Report the monitoring data on an annual basis as part of the DOGM reporting requirement.
21. There should be a description of critical brine chemistry that initiates the transfer of product to the next processing stage. Some of the chemistry is not in the plan. There is only partial chemistry for the #1 and #2 harvest ponds. There is additional chemistry required for the carnalite pond. There is no chemistry for the ante pond. There is no chemistry for the magnesium chloride pond. There is no chemistry for the Final magnesium chloride pond (which the reports asserts is a concentration pond).
22. There needs to be a description of all ponds. The following ponds are not discussed in the plan:
 - a. Ante Pond (Not discussed in the plan)
 - b. Magnesium Chloride Ponds (Not discussed in the plan. The ditches around the pond are discussed.)
 - c. Final Magnesium Chloride pond near the office. (Not discussed in the plan, but there are drawings of the pond.)

Specific Comments:

1. Page 5, Paragraph 2.2.3 Climate. Comment: The phrase “orthographic effect” is used. We believe the phrase should be “orographic effect”.
2. Page 11, Paragraph 3.1.1. Information on pump station number 2 should be included. There should be a narrative on the locations of pump station number 3 and pump station number 5 for ease of reading. The table should define if the percent is by weight or by volume.
3. Figure 10. The range of distances from the ditch to the spoil pile should be given.

4. Page 14. The depth of the deep brine well should be stated to show that it is located in a different aquifer.
5. Page 20, Paragraph 4.1 there needs to be a reference to a diagram of the North and South ripening ponds. Maybe a simple flow chart showing the sequence of the ponds would be effective here.
6. Page 23. There should be a discussion of the KCL content prior to the Magnesium Chloride dropping out of the solution.
7. Page 26. Is the phrase "Primary Pump Station 5" correct?
8. Page 27. The plan states that there are 1500 tons per day that go through the mill. The annual production needs to be defined. Does this mean that 547,500 tons per year are put through the mill? Once the number is defined, then the output of Potash should be shown with its average K percent.
9. Figure 21. This does not seem to match p. 27. For example: There are no attrition cells and the surge bins are missing on the figure.
10. Page 29. The phrase, "The leached concentrate slurry leaves the last leach tank at a density of 25%". The phrase percent density is confusing. Is the correct phrase, percent solids? If it is not percent solids, then it should be defined.

If you require further information please contact Mr. Stan Perkes, (801) 539-4036.

Sincerely,

JAMES F KOHLER

James F. Kohler
Chief, Solid Minerals Branch

Enclosure 1: (Draft 1994 Reclamation Plan with Cat and Komatsu spec. sheets).

Enclosure 2: Drawing 4.3

Enclosure 3: Drawing 4.4

cc: Salt Lake Field Office, Larry Garahana, Bill White
Utah Division of Oil, Gas, and Mining (Attn. Tom Munson)
Mine Files - UTU-087809
Chron

Intrepid mine plan comments 05 23 2007-JM-SA